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# Validation of the German-language Clance Impostor Phenomenon Scale (GCIPS)

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ABSTRACT

The Impostor Phenomenon (IP) is characterized by external attribution of success, feelings of inadequacy, and a fear of being exposed as intellectual fraud. The most frequently used and psychometrically sound IP measure is the Clance Impostor Phenomenon Scale (CIPS) whose German version has not been validated yet. The aim of this study was to examine the psychometric properties and validity of the German CIPS. In two independent samples ($N = 151$; 149), analyses yielded good reliability ($\alpha = .87$; .89) and item-total correlations (.47; .51). Robust correlations to IP-related variables (depression, fear of negative evaluation, attributional style, locus of control, and self-esteem) supported the nomological validity. Partial correlation analysis controlling for depression revealed a unique attributional style for IP-high scorer which manifests in external-instable attributions concerning success. In line with previous findings, an exploratory factor analysis (Sample 1) yielded three factors (*Fake*, *Luck*, and *Discount*), which accounted for 44% of variance. Confirmatory factor analyses (Sample 2) supported this 3-factor-model. The diagnostic application of the German CIPS is encouraged.



## 1. Introduction

The Impostor Phenomenon (IP; Clance, 1985) is characterized by the failure to internalize success despite meeting objective criteria. Instead, positive outcome is attributed to external factors as chance and luck leading to feelings of "intellectual phoniness". In consequence, a constant fear of not being able to repeat success and being exposed by others as an intellectual fraud arises.

The IP occurs independently from gender, affects people of different professions, and is not restricted to Western Cultures (Sakulku & Alexander, 2011). Nevertheless, only one German-language IP measure exists which has not been fully validated and tested with respect to its psychometric characteristics yet: The German *Clance Impostor Phenomenon Scale* (GCIPS; Clance, 1988).

### 1.1. Assessment of the Impostor Phenomenon

Three English-language questionnaires are available for the assessment of IP. The 14-item *Harvey Impostor Phenomenon Scale* (HIPS; Harvey, 1981) revealed psychometric weaknesses (unacceptable low internal consistencies) and insufficient validity. Further use of the HIPS is not recommended (e.g., Hellman & Caselman, 2004).

The 20-item *Clance Impostor Phenomenon Scale* (CIPS; Clance, 1985) assesses self-doubts about the own intelligence and abilities (*Fake*), the tendency to attribute success to chance/luck (*Luck*), and the inability to admit a good performance (*Discount*). Although, French, Ullrich-French, and Follman (2008) proposed a 2-factorial structure with *Fake* and a second dimension combining *Luck* and *Discount*, there is more support for the 3-factor-solution (e.g., Chrisman, Pieper, Clance, Holland, & Glickauf-Hughes, 1995). The CIPS proved to be a psychometrically sound questionnaire with high internal consistency and convergent, discriminant, and nomological validity (Chrisman et al., 1995). Despite its frequent use, the German-language CIPS version, published as part of the translation of Clance's (1988) book about the IP, has not been psychometrically tested yet.

The third IP measure is the 51-item *Perceived Fraudulence Scale* (PFS; Kolligian & Sternberg, 1991) that also demonstrated good psychometric properties. Moreover both measures, CIPS and PFS, assess the same content, share comparable relations to external variables, and correlate positively with each other, supporting convergent validity. Therefore, CIPS and PFS could be considered equivalent, but for economical reasons, the use of the CIPS seems favorable.

### 1.2. Selected personality correlates

The association of selected personality variables with the GCIPS will be tested (nomological validity). A well-replicated relationship was established between IP and self-esteem in terms of moderate to high negative correlations (e.g., Chrisman et al., 1995). Accordingly, we

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expect these relations to be replicable for the GCIPS. Further, fear of negative evaluation is characterized by constant thinking of and fearing evaluations by other persons, feelings of distress over expectations of other's negative evaluations. "Impostors" seem to be especially sensitive for feelings of anxiety and report higher levels of fear of being evaluated negatively by others (e.g., Chrisman et al., 1995). Thus, a positive correlation between the GCIPS and a fear of negative evaluation measure is expected.

Psychological well-being is affected by IP-associated behavior and cognition; for example, robust positive relationships were reported between the IP and negative affectivity, such as neuroticism and depressiveness (e.g., Sakulku & Alexander, 2011). Thus, we expect positive correlations between GCIPS scores and depression.

Since the IP is characterized by failing internalization of success and its attribution to chance/luck, we assume that attributional style and locus of control (LOC) are correlated to the GCIPS. Impostors tend to attribute positive events, especially success in achievement situations to external factors (chance/luck), instead of own abilities (Thompson, Davis, & Davidson, 1998). Hence, we assume that the GCIPS is negatively correlated to an internal-stable-global attributional style, especially in successful achievement-related situations. Due to similarities between attributional style and LOC, we expect the internal LOC to be negatively, and the external LOC to be positively correlated to GCIPS scores.

### 1.3. Aim of the study

The main aim of this study is to test the psychometric properties of the GCIPS and provide evidence for its validity. We aim for replicating well-established relations with depression, LOC, attributional style, fear of negative evaluation, and self-esteem to investigate the nomological validity of the GCIPS. Furthermore, the ambiguous findings concerning the factorial structure of the CIPS (Chrisman et al., 1995; French et al., 2008) will be addressed by performing exploratory and confirmatory factor analyses (EFA/CFA) in two independently collected samples.

## 2. Method

### 2.1. Participants

Sample 1 consisted of $N = 151$ (113 female, $M = 27.5$, $SD = 10.3$, [18;71] years) participants. While most subjects ($n = 110$) were undergraduates, remaining participants had a school leaving diploma qualifying them to attend a university ($n = 8$), a university degree ($n = 24$), or held a completed vocational education ($n = 9$). To test the stability of psychometric and factor analytical results, a sample of psychology undergraduates ($N = 149$, 113 female, $M = 22.5$, $SD = 4.5$, [17;48] years) was recruited.

### 2.2. Instruments

The German-language *Clance Impostor Phenomenon Scale* (GCIPS; Clance, 1988) comprises 20 items (e.g., "I rarely do a project or task as well as I'd like to do it"). Answers are given on a Likert scale from 1 (*never*) to 5 (*always*). The GCIPS has been frequently used in research; e.g., for the study of the effect of IP on leadership styles (Bechtold, 2015), career development (Neureiter & Traut-Mattausch, 2016), stress and working styles (Rohrmann, Bechtoldt, & Leonhardt, 2016).

The *Attributional Style Questionnaire* (ASQ) by Poppe, Stiensmeier-Pelster, and Pelster (2005) was used to identify the attributional style. It contains 16 different (eight performance-, eight social-) scenarios, half of them with positive and negative outcome, respectively. Respondents should provide one potential cause which led to the described situation. This cause is rated by using a 5-point semantic differential for the dimensions *Internality* (*Totally due to other people/circumstances – totally due to me*), *Stability* (*will never again be present – will always be present*), and *Globality* (*influences just this particular situation – influences all situations in my life*). Two sum scores are computed: *Generality*, as sum of *Stability* and *Globality*, and a *Total* score by summation of all three subscales serving as a unified indicator of an internal-stable-global attributional style. There is broad support for the validity of the ASQ in the literature.

The 66-item *Depressive Experiences Questionnaire* (DEQ; Blatt, D'Affliti, & Quinlan, 1976; German: Beutel et al., 2003) covers three dimensions: *Dependency* (e.g., "I become frightened when I feel alone"), *Self-criticism* (e.g., "I tend to be very critical of myself"), and *Efficacy* (e.g., "I feel comfortable when I am given important responsibilities"). Answers are given on a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). In accordance with Blatt et al. (1976), scoring followed a factor-weighting procedure using weights derived from a German sample by Beutel and colleagues.

The *IPC-Scales* by Levenson (1972; German: Krampen, 1981) measure LOC by three subscales of eight items each: *Internality* (e.g., "My life is determined by my own actions"), *Powerful others* (e.g., "My life is chiefly controlled by powerful others"), and *Chance* (e.g., "When I get what I want, it's usually because I'm lucky"). We used a 5-point answer format from 1 (*very wrong*) to 5 (*very true*).

The *Rosenberg Self-Esteem Scale* (SES; Rosenberg, 1965; German: v. Collani & Herzberg, 2003) consists of 10 items (e.g., "I take a positive attitude toward myself") and is a widely used measure for self-esteem. Answers are given on a Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

The *Fear of Negative Evaluation Scale* (FNES; Watson & Friend, 1969; German: Vormbrock & Neuser, 1983) measures fear of negative evaluation by others concerning performance, own behavior, and physical appearance. Twenty items (e.g., "I am afraid that others will not approve of me") are rated on a 5-point scale from 1 (*almost never*) to 5 (*almost always*).

### 2.3. Procedure

Sample 1 was recruited for the online study through flyers on-campus and participants were encouraged to forward the link to the study to their families and peers. Completion took 40–50 minutes. Sample 2 consisted exclusively of students attending a lecture on personality psychology at the University of Halle-Wittenberg. In this sample only the GCIPS was administered in its paper-and-pencil version along with basic demographic data (age and gender). The only inclusion criterion for participation was an age of ≥16 years. In both samples, students received course credit for participation.

## 3. Results

### 3.1. Descriptive statistics and analysis of reliability

Table 1 contains descriptive statistics and reliabilities of all subscales. A visual inspection of GCIPS scores (QQ-Plots) and Shapiro-Wilk tests ($p > .29$) indicated normal distribution. Reliabilities were high for the GCIPS and remaining questionnaires except for the IPC. The GCIPS scores existed independently from age ($p > .85$, two-tailed). Despite a significant ($p = .043$, two-tailed) correlation with sex in Sample 1 only, this result is interpreted as negligible since merely 2.9% variance in GCIPS was explained by sex.

### 3.2. GCIPS item analysis

Results of item analyses are displayed in Table 2. In both samples, indices showed a well-balanced difficulty distribution and a psychometric suitable score variation. Further, skewness parameters indicated normally distributed item scores (exception item 9).

Analyses revealed satisfactory corrected item-total correlations (*CITC*) for 19 items in Sample 1 (17 items in Sample 2; all > .30;